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September 9, 1994

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D. C. 20554

Re: Ex Parte Meeting
CC Docket No. 94-1

Dear Mr. Caton:

On September 8, 1994, Whit Jordan, Jeff Olson, Mike O'Brien and Frank McKennedy, representing the United States Telephone Association (USTA), met with Anthony Bush, Alex Belinfante, David Nall, Mark Uretsky and Dan Grosh of the Common Carrier Bureau staff and, in a separate meeting, with Michael Katz of the Office of Plans and Policy regarding the above-referenced docket. The attached written material was distributed and discussed at both meetings. The viewpoints expressed were consistent with USTA's written comments before the Commission.

The original and a copy of this ex parte meeting notice are being filed in the Office of the Secretary on September 9, 1994 due to the lateness of the meetings. Please include it in the public record of this proceeding.

Respectfully submitted,

Linda Kent

Linda Kent
Associate General Counsel

Attachments

cc w/out attach: Anthony Bush
Alex Belinfante
David Nall
Mark Uretsky
Dan Grosh
Michael Katz

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Productivity Issues

CC Docket No. 94-1, LEC Price Cap Performance Review

Design

Commission carefully designed the price cap formula (GNP-PI less productivity offset plus/minus exogenous) to provide proper incentives.

Incentives of price caps depend critically on productivity offset. If set too high, expected returns on investments will be below levels needed to attract capital. Correct offset is necessary to encourage capital market support.

Changes in Offset

Only reason to correct offset is to reflect fundamental errors in measurement of long-term industry productivity. Productivity has <u>not</u> broken from long-term trend.

Offset above the long-term industry TFP trend would significantly dilute efficiency incentives that the plan was established to achieve.

Evidence from Studies

The only appropriate study method for determining productivity growth is total factor productivity (TFP). Christensen study presents those results.

Evidence indicates the need to correct (reduce) the productivity offset:

- **Total factor productivity study for the LECs**
- **Update of the Commission's own productivity studies**

Misconceptions

The productivity offset should <u>not</u> be increased based on:

- **Earnings results**
- **Input price differentials**
- **Changes in Interest Rates**
- **More onerous Common Line price index**

Productivity Issues
CC Docket No. 94-1, LEC Price Cap Performance Review

Incentives are a Basic Design Requirement

Incentive regulation promotes efficient behavior by allowing companies to retain the financial benefits of their increased efficiencies.

- **Price cap regulation decouples prices from allocated costs to foster technical efficiency, as the market does for a competitive firm.**
- **The periodic review of the price cap formula must ensure retention of the very efficiency incentives that the Commission intended with the adoption of the plan.**
- **Adjusting prices for unanticipated successes or failures significantly dilutes any incentive improvements intended -- by recapturing productivity gains. {NERA, p. 3}**
- **Raising the productivity offset does <u>not</u> make LECs more productive.**

Price Cap Formula:

The price cap index formula (the productivity offset, the inflation adjustment and exogenous adjustments) ensures that overall rates carry an initial presumption of just and reasonableness.

Ensure that historical long-term industry productivity gains go to customers.

The Commission carefully crafted the price cap formula to:

- Provide incentives for efficiency.
- Not be affected by company behavior.
- The Commission carefully constructed the price cap adjustment formula to avoid compromising the incentive properties of the plan. It did so by using overall U.S. economy inflation and a long-term industry productivity differential. {NERA, p. 3}

Inflation measure:

- Calculated for the U.S. economy, not for the industry.
  - This provides incentives to be efficient in the purchase of inputs.
- Index not influenced by the individual companies or groups of companies.
  - Carriers cannot influence GNP-PI; "immune to manipulation." Industry-specific costs are influenced by actions of carriers.

Productivity offset:

- Long-term, rather than short-term.
  - FCC relied on "long term historic productivity for the industry" in initial price cap proceeding. {AT&T Price Cap Order, para. 222}
  - "regardless of short term or year-to-year changes ..."
  - "productivity measures over short time periods are of less value than longer term averages." {para. 235}

- **The Commission decided to use long-term historical industry productivity specifically to provide proper incentives for efficiency.**

  - **Experienced productivity fluctuates significantly. It is normal to observe large movements year-to-year. The need to focus on long-term productivity requires that the typical volatile fluctuations in short-term results should be smoothed, resulting in a stable productivity offset.**

  - **Two or three years is not sufficient time to view the underlying long-term trend or observe fundamental changes due to incentive regulation. {NERA, p. 4} Any measurements over such a short period are volatile and inherently inaccurate. There is no evidence that productivity has made a radical break from past trends (i.e., Christensen study).**

- **Historical, rather than projected.**

  - **Best indicator of future productivity is historical trend. Predictions are difficult, imprecise.**

  - **"a long term average bears a closer relationship to the level of productivity in the future than will contemporary efforts of prediction." {AT&T Price Cap Order, para. 224}**

- **Industry, rather than for individual companies or groups.**

  - **Offset not affect by individual behavior**

  - **Use of industry defines comparable market broadly to set appropriate, adaptive target**

  - **Mimics competitive environment**

Christensen Study

USTA had Christensen Associates, premier authority on productivity issues, perform the productivity study for the price cap LECs.

- **Ameritech, Bell Atlantic, BellSouth, Contel, GTE, NYNEX, Pacific, SNET, Southwestern Bell, US West -- represents 95% of the price cap LECs.**

Used publicly available data: Form M, ARMIS, Tariff Review Plans, responses to data requests filed with the Commission (Part 31/32)

- **Christensen performed thorough reviews of the data to determine the appropriateness and reasonableness of the data.**
- **As a result, Christensen Associates has a high degree of confidence and comfort with the results of their productivity study.**

Uses the Total Factor Productivity (TFP) Definition:

TFP Level = Outputs / Inputs
TFP Growth is the growth in this ratio.

Output = Revenue adjusted to constant prices (Rev. / Price Index)
Input = Labor, Capital, Materials adjusted for constant prices

The Productivity Offset Requires Subtracting U.S. Productivity (TFP):

- **That the Commission selected GNP-PI as the inflation adjustment is important. GNP-PI (i.e., U.S. output prices) already reflects lower inflation due to the average productivity of all firm in the U.S. economy. National output prices are lower because firms achieve productivity gains.**
- **Because U.S. productivity is already reflected in GNP-PI it must be specifically excluded from the productivity offset, which is a further subtraction from GNP-PI. All prior Commission actions have correctly recognized this fact.**
- **NERA lays out the proper "math of productivity." {NERA, pp. 4-10}**

Concurrence with Other Studies:

- **Most productivity studies for telecommunications have resulted in differentials of approximately 2%. {NERA Reply, pp. 15-16}**

Calculation of Productivity Differential Offset:

- **Christensen TFP study demonstrates 2.6% LEC productivity growth.**

		1984-92
	Output Growth	3.5%
less	Input Growth	0.9%
	Productivity (TFP) Growth	2.6%

Based on U.S. productivity growth of 0.3%, this results in a differential (LEC productivity growth less U.S. productivity growth) of 2.3%. (This updates the Christensen calculation for the most recent U.S. productivity data.)

		Filed 5-9-94	Revised
	LEC Productivity	2.6%	2.6%
less	U.S. Productivity	0.9%	0.3%*
	LEC Differential	1.7%	2.3%

* **Published by the U.S. Department of Labor, Bureau of Labor Statistics on July 11, 1994.**

- **NERA shows that the above calculation is the proper formulation in the Commission's price cap plan. {NERA, pp. 4-10}**

Most parties agree that Total Factor Productivity (TFP) is the proper way to measure productivity. {Ad Hoc agrees with the Christensen method of calculating TFP. Ad Hoc, ETI Attach. p. 60}

Rebuttal of Critiques of Christensen Study

Some parties have made incorrect challenges to the Christensen study:

- **Flawed attempts to force fit a TFP method to interstate services only:**
  - **Total factor productivity methods examine the volume of total outputs produce by the use of all inputs. Inputs cannot be meaningfully separated into interstate-only inputs.**
  - **It is totally incorrect to assume (as Ad Hoc does) that interstate outputs can be produced using the observed growth in total inputs. Outputs require joint and common costs (intrastate and interstate).**
  - **It is not possible or correct to force fit a TFP analysis around the price cap basket structure.**
- **Incorrect claims regarding use of economic depreciation rates:**
  - **One must use economic depreciation rates, rather than the changing regulated accounting depreciation rates to correctly measure capital inputs. Economic depreciation rates correctly measure the consumption of assets.**
  - **Changes in prescribed depreciation rates used for regulatory accounting purposes do <u>not</u> represent changes in physical inputs.**

Update of Commission Studies

Updating the Commission's long-term study and its short-term study (updated for actual data for 1989-92) reveals that the LEC productivity offset should be reduced. {NERA Reply, p. 2}

<u>Productivity Studies Relied Upon in 1990</u>	<u>Update</u>
Long-term FCC study (Spavins/Lande)	2.1%
Short-term FCC study (Frentrup/Uretsky)	2.7%
Overall Productivity Offset	2.4%

Earnings-Based Measures of Productivity are Inappropriate

AT&T and GSA present recent LEC interstate earnings and incorrectly recommend raising the productivity offset based on interstate earnings.

- **Short-term earnings are not a valid measure of long-term productivity. Numerous accounting factors affect earnings, but do not represent changes in underlying productivity. {NERA Reply, pp. 33-35}**

- **Interstate earnings, as reported to the Commission, are based on arbitrary cost allocations and calculations (i.e, Parts 36, 64, 69 and 65). Earnings on ratebase is becoming increasingly less meaningful.**

- **By any measure, the earnings experienced by the LECs are reasonable. LEC earnings were at the 35th percentile of the S&P 400 Industrials.**

	Reported Earnings 1991-93
Price Cap LECs restated for depn. rates	12.34% 8.5% to 9.0%
S&P 400	14.92%
AT&T	13.22%
MCI	13.59%

- **AT&T's earnings have already been determined to be reasonable. AT&T's and MCI's earnings are already higher than the LECs'.**

  - **To meaningfully compare earnings, the significantly different depreciation rates must be considered. Rapid changes in technology, competition require higher depreciation rates than in LEC earnings.**

  - **LEC earnings, as reported use artificially low depreciation rates. {NERA Reply, p. 2}**

  - **After adjustment for comparability, LEC earnings (8.5% to 9.0%) are well below those that the Commission has determined are reasonable. This is about the 19th percentile of the S&P 400.**

- **AT&T, GSA, others incorrectly recommend any short-term earnings be recaptured, removing any incentive to succeed.**

Adjustments to Productivity for Input Inflation Differential

The recommendations that price caps be adjusted for a difference in input prices are wrong. Evidence demonstrates that there is no long-term difference between the input inflation in the U.S. economy and input inflation experienced by LECs.

- **Christensen evidence -- no difference in the long-term. {Christensen study cited by NERA, pp. 14-15}**
- **NERA evidence -- statistical tests show no difference over shorter periods. {NERA, pp. 15-16}**

By nature, measures of input inflation are volatile. Recent calculations by Ad Hoc show measured LEC input inflation negative in some years and as high as +10% in recent years. Basing long-term productivity on volatile input inflation would cause unstable prices for customers. {NERA Reply, p. 26}

The fact that the updated versions of the Commission's productivity studies (both the short-term Frentrup/Uretsky and the long-term Spavins/Lande studies) show essentially the same results as the Christensen direct TFP study proves there is no need for an input inflation adjustment. {NERA Reply, p. 5}

AT&T and Ad Hoc incorrectly represent the Christensen study and the proper method of calculating input inflation, suggesting inappropriate additions to the productivity offset. NERA correctly explains the mathematics of the productivity offset. Use of U.S. output inflation (GNP-PI or GDP-PI) with a productivity differential (industry TFP less U.S. TFP) without an input inflation adjustment is the correct price cap formula.

In Pennsylvania and California, where this issue has been examined, the state commissions correctly rejected use of an input inflation adjustment.

Adjustments to Productivity for Interest Rates (an Input Cost)

Adjusting price caps for changes in interest rates is an attempt to return to cost-plus regulation.

The temptation to fine-tune the price adjustment formula to account for specific factors that might otherwise change short-run costs must be resisted. Otherwise price cap regulation would degenerate into traditional ROR regulation, and none of the efficiency improvements intended by the adoption of price cap regulation would be realized. {NERA, p. 27}

- **Interest is only one input cost, related to capital input, in the same way the wage rates are only one input cost related to labor input. {NERA Reply, pp. 25-26}**

- **Making adjustments to price caps for changes in interest rates would distort the incentives to use capital and labor in their most efficient mixes and double count a portion of the cost change.**

- **Interest rates are already reflected in the GNP-PI. {NERA, p. 25}**

- **Also, because different results were <u>not</u> observed from the updates of the Commission's indirect productivity studies, no interest rate adjustments to the Christensen TFP results are warranted. {NERA, p. 26} Direct TFP studies (industry long-term) are appropriate.**

Interest rates have risen substantially during 1994, significantly lessening any perceived need to make adjustments to price caps. (See attached graph of interest rates.) {NERA Reply, pp. 39-40}

The Commission decided not to reduce AT&T's price cap indexes (or make any other price cap adjustments) based on the path of interest rates. No adjustments are appropriate here.

Effects of Competition on LEC Productivity

Parameters in the price cap plan, including the productivity offset must recognize competition. A direct effect of competition will be to reduce LEC output growth relative to input growth, reducing the LECs' long-term productivity potential. This is another reason the Commission should not set the productivity offset higher than about 2% (as indicated in the TFP study)

As access markets become increasingly more competitive, it will become correspondingly more difficult for the LECs to achieve a given productivity offset. The current 3.3% offset is too high.

- **Historically, firms have not been able to reduce inputs (costs) as fast as competition causes reductions in outputs (revenue). (The near-term loss of customers to competition cannot typically be met with offsetting cost reductions -- due to embedded investments and fixed costs.) This causes reductions in productivity.**

- **AT&T supports this rationale: "A 'break-even' analysis for the most recent period overstate future productivity because demand growth experienced in the last four years will not be sustained in the future." {quoted in AT&T Price Cap Order, para. 211.}**

- **Each 1 percentage point decline in the rate of growth of LEC output causes a reduction in achieved productivity growth of between 0.3% and 0.5%. {Christensen, p. 23.}**

- **Competition has already reduced LEC output growth. Growth has been experienced by private networks, IXC self-supply, CAPs, electric utilities and other non-LEC providers. As competition expands, further percentage point declines in LEC output growth will occur.**

- **Also, restrictive rate structures and onerous new service and restructured service rules make it even more difficult for the price cap LECs to achieve productivity gains.**

Adjustments to Productivity for Common Line Demand

A reduction to the Common Line price cap index for Carrier Common Line minutes growth (per line) is not appropriate when the productivity offset is set using total factor productivity.

- **Now that a reliable TFP-based productivity measure is available for the price cap LECs, the Commission should use it.**

- **TFP already includes the effects of demand growth for all services, including the effects of common line minutes of use. No further adjustments are necessary. Adding a Common Line demand adjustment to the PCI formula double counts productivity growth.**

- **It is inappropriate to establish different productivity offsets for individual services because reasonable measurement of TFP for an individual service is not possible.**

- **Allegations that LECs have no role in stimulating demand are wrong. LECs play a critical role in providing the services and technologies that facilitate demand growth. The price cap LECs have documented and the Commission has recognized the role of LECs in fostering and facilitating demand growth.**

Consumer Productivity Dividend

The consumer productivity dividend (CPD) additive to the productivity offset is no longer warranted.

- **The Commission imposed the CPD so that the first benefits of price cap regulation would flow 100% to access customers. The conversion to price cap regulation is now over.**

- **The CPD (now accumulated to 2%) has already reduced rates and has resulted in permanently lower price cap indexes. The CPD embedded in rates is worth approximately $1B annually to customers.**

- **Absent a fundamental change in the regulatory paradigm that would specifically yield additional productivity growth, there is nothing additional to be shared in this review. The mere fact that the plan is being reviewed does not warrant an arbitrary increase in the productivity offset above historical levels. {NERA Reply, pp. 31-32}**

- **Ad Hoc provides no rationale for maintaining or increasing the CPD.**

Inclusion of a CPD would constitute an unnecessary departure from the investment and efficiency incentives that exist in competitive markets, where firms are not forced to share the benefits of above-average productivity performance with their customers. {Harris, p. 25}

- **Ad Hoc is wrong in its claim that USTA's proposal would threaten national competitiveness and diminish national investment. LECs provide approximately 76% of the investment in the telecommunications sector. The USTA proposal provides the market-based investment incentives which are critical to U.S. competitiveness.**

The CPD is not necessary to ensure just and reasonable rates.